PROJECT TITLE : CIGARETTE DEVELOPMENT 2

PERIOD COVERED : MAY 21 - JUNE 26 1981

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400 COMMONWEALTH 4 (CONTROL)

Objective

To develop a low-tar Virginia cigarette of high quality, delivering 4.0 mg tar and conforming to the Hunter list.

Description of samples and results

Using tobacco blend No GB1040001NO2, batch No 843, cigarette prototypes of various designs were produced and evaluated. The description and evaluation results of the above mentioned prototypes are stated in the table next page.

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COMMONWEALTH 4 (CONTROL)

PROTOTYPE NO		2 P	9 P	10 P	11 P	16 P	17 P
CUT FILLER							
TA	%	2.31	2.58		2.43		2.50
RS	%	13.3	16.3		15.0		16.5
N-NO_3	%	0.02	0.02		0.03		0.01
Filling power at 12 % M	mg/ml	252	231	233	233	237	237
FILTER TYPE		2.5Y/48/DICO	----------	----------	2.5Y/48	2.5Y/75+5.0Y/45	2.5Y/75+5.0/45
FILTER RTD	mm WG	85	82	84	90	126	125
CIGARETTE							
Format	mm	7.95 / 20 /.84.4	----------	----------	----------	----------	----------
Total weight	mg/cig.	1066	1003	1008	989	1031	1026
Tobacco weight	mg/cig.	808	745	751	751	750	749
Total RTD	mm WG	101	82	81	90	99	99
Cigarette paper		Ecusta 753	----------	Ecusta 708	----------	Pela 170 MNC	Ecusta 708
Tipping paper		4 M. 0.3.3.5	6 M. 0.3.3.5	----------	----------	4 M. 0.3.3.5	----------
Dilution	%	56	57	61	65	61	64
Compressibility at 12 % M	mm	2.67	3.50	3.38	3.29	3.53	3.16
SMOKE							
CO	mg/cig.	5.8	7.4	7.1	6.6	6.5	7.0
NO	mg/cig.	0.03	0.03	0.03	0.03	0.03	0.03
TAR	mg/cig.	4.2	4.7	4.7	4.6	4.2	4.3
SN	mg/cig.	0.49	0.57	0.60	0.55	0.56	0.57
Puff count		12.0	10.6	11.1	11.4	10.3	11.1

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Of the above trials, prototype No 9 P was chosen by Panel A and a sample of these cigarettes was sent to Richmond where experimental flavouring tests will be conducted.

Comments

Most of the analytical results obtained are within the proposed objective but, there is a problem with the "puff-count" as it is too high.
The problem was discussed with the Leaf experts (Lausanne) who suggested continuing development on the basis of the HILTON UK design, prototype No 85 P, with some changes in the cigarette paper.
At the present time, the above-mentioned cigarettes and many others have been evaluated but the problem with the "puff-count" still persists. At this point, assuming that the "puff-count" is considered a highly valuable parameter, we should start considering other factors than cigarette design in order to achieve a lower "puff-count".
All the possibilities concerning cigarette design have been exploited without success. Therefore, it is suggested to approach the problem from the level of tobacco blend, followed by improved processing.
Some justification for the above suggestions are derived from the following points of interest :

1. The TA of the cut-filler, showing an average of 2.46 % incorporated in a cigarette which has to deliver 4.0 mg tar and an 8 puffs-count, may be too high.

2. The procedure followed in the processing of the tobacco blend had to be adapted to the existing FTR processing-line.

3. Our production center, offering a maximum of 36 c/i (laminae-line), limited the cut of the tobacco strips to a larger size than that specified at the Lausanne meeting.

4. Changes or alterations in the cutter (laminae-line) would have caused production problems and an extensive delay in the project.

In conclusion, as this trial was adapted, it would only have been by chance that the outcome of this first operation could have covered all the parameters.

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Source: https://www.industrydocuments.ucsf.edu/docs/njhk0000

420 COMMONWEALTH 9 (CONTROL)

Objective

To develop a Virginia cigarette of high quality delivering 9.0 mg tar, which conforms to the Hunter list.

Description of samples and results

Using tobacco blend No GB1042001ND1, batch No 848, cigarette prototypes of various designs were produced and analysed. The description and results of these prototypes are given in the table next page.

Comments

The analytical results obtained on the previously described prototypes show that at least two of them are within the objective.
These prototypes were presented to Panel A who preferred the prototypes with 25-mm filter plug; but, further development was requested due to the lack of impact and tobacco taste.
In general, the problems encountered in the COMMONWEALTH 9 Control correspond to those of COMMONWEALTH 4 Control.

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ANF/cap/JUNE 30 1981

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COMMONWEALTH 9 (CONTROL)

PROTOTYPE NO		3 P	6 P	7 P	8 P	10 P
CUT FILLER						
TA	%	2.74	2.80		2.84	2.87
RS	%	15.8	14.6		14.9	15.4
$N\text{-}NO_3$	%	0.04	0.02		0.03	0.02
Filling power at 12 % M	mg/ml	261	250	252	253	270
FILTER TYPE		3.4 I / 46	2.5 Y / 48			
FILTER RTD	mm WG	76	86	82	88	111
CIGARETTE						
Format	mm	7.95 / 25 / 84.4	7.95 / 20 / 84.4	7.95 / 20 / 84.4	7.95 / 20 / 84.4	7.95 / 25 / 84.4
Total weight	mg/cig.	1025	1030	1033	1036	1096
Tobacco weight	mg/cig.	766	792	799	801	809
Total RTD	mg WG	71	80	79	85	102
Cigarette paper		Wattens 60	Ecusta 708	Wattens 60	Ecusta 708	Ecusta 708
Tipping paper		6 M. 0.15.4.5	4 M. 0.3.3.5	4 M. 0.3.3.5	6 M. 0.15.4.5	4 M. 0.15.4.5
Dilution	%	49	50	51	47	44
Compressibility at 12 % M	mm	4.14	4.16	4.33	4.27	3.84
SMOKE						
CO	mg/cig.	8.8	7.1	8.4	9.4	10.5
NO	mg/cig.	0.04	0.03	0.04	0.04	0.04
TAR	mg/cig.	9.6	9.2	9.7	9.8	9.2
SN	mg/cig.	1.19	1.14	1.20	1.22	1.12
Puff count		10.1	10.9	10.9	10.5	10.7

Source: https://www.industrydocuments.ucsf.edu/docs/njhk0000